

THE A B C OF THE FEDERAL RESERVE SYSTEM

BY

EDWIN WALTER KEMMERER, PH.D.



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FEDERAL RESERVE BANK
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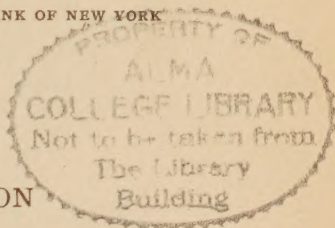
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IN PRINCETON UNIVERSITY

With a Preface by

BENJAMIN STRONG, LL.D.

GOVERNOR OF THE FEDERAL RESERVE BANK OF NEW YORK



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CONTENTS

	PAGES
PREFACE. By BENJAMIN STRONG	ix-xiii

CHAPTER I

PURPOSE AND PLAN	1-2
Lack of familiarity with federal reserve system on part of public, and its dangers, 1.—Purpose of book, 2.—Plan of book, 2.	

CHAPTER II

DECENTRALIZATION OF AMERICAN BANKING PRIOR TO FEDERAL RESERVE SYSTEM	3-7
Banks lacked organization and effective leadership in time of crisis, 3-4.—Reserves widely scattered, 4-6.—Reserves immobile, 7.	

CHAPTER III

INELASTICITY OF AMERICAN BANK CREDIT PRIOR TO FEDERAL RESERVE SYSTEM	8-18
Extent to which bank credit is used as a medium of exchange, 8-10.—Why circulating bank credit should be elastic, 10-11.—Bank-note inelasticity over long periods under old banking system, 11-13.—Seasonal inelasticity of bank notes, 13-15.—Bank-note inelasticity in times of crisis, 15-17.—Inelasticity of deposit credit, 17.—Evil results of credit inelasticity, 18.	

CHAPTER IV

DEFECTIVE EXCHANGE AND TRANSFER SYSTEM	19-24
The "float" and the practice of routing checks, 19-21.—Checks in transit commonly counted as legal reserve money, 21-22.—Large domestic shipments of currency required under old banking régime, 22-23.—Foreign exchange difficulties, 23-24.	

CHAPTER V

DEFECTIVE BANKING MACHINERY FOR FEDERAL GOVERNMENT.	25-27
Difficulty of apportioning government funds among nine sub-treasuries and over fifteen hundred depositary banks, 25-26.—Four evil results of practice, 26-27.—Summary of defects of old banking system, 27.	

CHAPTER VI

HOW THE FEDERAL RESERVE SYSTEM IS REMEDYING THE OLD EVIL OF THE DECENTRALIZATION OF AMERICAN BANKING... 28-49

Division of country into twelve federal reserve districts, 28-29.—Membership in federal reserve system, 29-31.—Democracy of federal reserve banks' plan of organization, 31-33.—Coordination of twelve federal reserve banks and centralization of their control provided for by means of federal reserve board, advisory council, and class C directors of federal reserve banks, 33-35.—District centralization of bank reserves, 35-38.—Mobilization of reserves, 38-39.—Inter-district mobility of reserves, 39.—Rediscounting by one federal reserve bank for another, 39-42.—Open-market operations, 42-44.—Creation of a broader discount market for commercial paper, 44-45.—Increasing use of the trade acceptance, and advantages of trade acceptance over open-book account credit, 45-46.—The bank acceptance, 46-48.—Inter-district mobility of reserves promoted by increasing use of trade acceptances and bank acceptances, 47-48.—Intra-district mobility of reserves increased by federal reserve system, 48-49.

CHAPTER VII

CREDIT ELASTICITY UNDER THE FEDERAL RESERVE SYSTEM.... 50-65

Provisions of federal reserve act for bond-secured national bank notes, 50-51.—The federal reserve bank note, 51.—Federal reserve notes, 51-52.—Their elasticity, 52-57.—Elasticity of deposit currency obtained in a number of ways: Removal of old rigid legal reserve requirements, 58. New legal reserve requirements less rigid and may be suspended in times of emergency, 58-61. Privilege of rediscounting at federal reserve banks, 61-62. Privilege of borrowing on collateral notes with short maturities, 63.—Contractility of circulating credit under federal reserve system, 64-65.

CHAPTER VIII

DOMESTIC AND FOREIGN EXCHANGE UNDER THE FEDERAL RESERVE SYSTEM 66-83

Provisions of federal reserve law concerning domestic exchange, 66-69.—Early experiments of the federal reserve authorities as regards the clearing and collection of checks, 69.—Present clearing and collection system, 70-75.—The gold settlement fund, 75-78.—Foreign exchange, foreign agencies and branches of American banks organized for foreign business under the new banking system, 79-83.

CONTENTS

vii

CHAPTER IX

PAGES

THE FEDERAL RESERVE SYSTEM AND THE FEDERAL TREASURY.. 84-92

Federal reserve banks authorized by law to be depositaries of government funds, 82-83.—Extensively used as depositaries by Secretary of the Treasury, 83-87.—Federal reserve banks as fiscal agents of Government render invaluable services in the financing of the war, 88.—President Wilson's appeal to non-member banks to join federal reserve system as a matter of patriotic duty 88-90.



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PREFACE

By

BENJAMIN STRONG, LL.D.

Governor of the Federal Reserve Bank of New
York

The federal reserve banks came into being in the month of November, 1914. The passage of the legislation by which they were created had been preceded by five years of discussion, following the financial upheaval of the fall of 1907, such as might have been expected to prepare the way for the considerable changes in banking methods contemplated by the new law.

Notwithstanding, however, that American bankers had gained a better understanding of the deplorable defects in the American banking and currency system, the managers of the new federal reserve banks soon found that the welcome accorded to them by the banks of the country was, to say the least, cool. Business men generally welcomed the change for the better, recognizing the protection which the reserve system afforded them; but nevertheless both bankers and

business men were regrettably ignorant of what it all meant.

It was the influence of the war which demanded that the federal reserve banks be organized as promptly as possible. The best banking machinery and the best banking talent in the country seemed to be required to protect the interests of both bankers and business men. Much was expected from the new system, once it was started. Very shortly, however, immense imports of gold from abroad, general business prosperity stimulated by war profits, and reasonably comfortable conditions in credit and banking, appeared to put the federal reserve banks for the first two and one-half years of their existence into the class of expensive luxuries; in fact, they were regarded as examples of governmental interference with business which were tolerated but, nevertheless, were not appreciated by many bankers.

During this interval, November, 1914, to April, 1917, the system, by slow stages of progress, found itself. The machinery for conducting actual operations was designed and developed far beyond the requirements of the moment. The terms of the Act were perfected where need was discovered, the men engaged in the work became better acquainted with their duties and with each

other, skilled clerks were engaged and trained, and accounting methods were perfected, so that when the test came as a result of our entry into the war, in April, 1917, the Federal Reserve banks were in large measure prepared for the grave tasks and responsibilities at once to be assumed.

During the first twelve months of our country's participation in the war the reserve system became established upon a basis of confidence and respect, even in fact of admiration, among both bankers and business men; and its future therefore seems assured so long as good management deserves the support now enjoyed.

During these four years, however, the work of organization, and during the last year and a half the work assumed by the Federal Reserve banks as fiscal agents of the Government, have so occupied the time of all connected with the system that it has been difficult to overcome, in a comprehensive way, much of the ignorance and misunderstanding of the functions of the system. It is widely accepted as successful and necessary, but, with some exceptions, it is still hardly possible to say that it is understood. It has come as an enlargement of the scope of a great banking machine which had become complicated by the dual development of two classes

of banks, national and state; and, in the case of state banks, a development which covered a vast field of business activity not confined to commercial banking. Under the influence of the new system of twelve closely allied banks of reserve and of discount, the tendency will be toward unification and simplicity which will be brought about by the state institutions, in increasing numbers, becoming stockholders and depositors in the reserve banks.

Until, however, through evolution in methods and many changes in both state and national laws, we have a truly unified system, banking in this country will be a puzzle and a mystery to the casual observer, to the business man, and to bankers abroad, unless its various features are presented in a concise and comprehensive form, stripped of the technicalities of economic discussion. It is much more difficult to present a complex problem in concise form than in extended detail. This task, however, Professor Kemmerer has undertaken with distinct success. An account of the functions assumed by the federal reserve banks as fiscal agents of the United States Government, and of the handling of war bonds, certificates of indebtedness and government funds would have complicated, and, possibly, rendered less clear the description of the

position the federal reserve system occupies in the banking field. It would have involved, further, a discussion of the long felt necessity for a modification of the independent treasury system. These subjects, therefore, have properly not been enlarged upon.

It is a public service to undertake the difficult task of preparing an account of this great change in our fiscal system so as to combine accuracy with a comprehensive survey of the subject and, at the same time, to avoid technical details. All that is required to give the reader an understanding of the fundamentals of the new régime of American banking is contained in the following pages, which will be read with attention and interest by many who have been seeking this information during the past five years.

federal reserve machinery and the technical language in which this machinery is usually described. In a democracy, however, widespread ignorance, among the voters, of the country's financial system is fraught with danger.

America's leading manufacturing, transportation and commercial concerns years ago attained heights of economic efficiency which made them the envy of foreigners. None, however, envied us our banking system. None followed it except soon regretfully to turn back. This was true, despite the fact that our old American banking system had many substantial merits. It was reasonably safe, it yielded good profits, it was adaptable to the local needs of widely varying communities, and it developed the check and clearing system to a degree of perfection found in few if any other countries. Along with these meritorious features, however, it contained a number of very serious defects. The chief of these may be grouped conveniently under four heads: I. Decentralization. II. Inelasticity of credit. III. Cumbersome exchange and transfer system. IV. Defective organization as regards relationship with federal treasury. In the four succeeding chapters these four groups of defects will be considered, and in the following four chapters will be discussed the respective remedies provided by the federal reserve system.

CHAPTER II

DECENTRALIZATION OF AMERICAN BANKING PRIOR TO FEDERAL RESERVE SYSTEM

In 1912 the United States had many times more commercial banks than any other country in the world, and these banks averaged much smaller than those of any other important country. Official figures at that time placed the number of independent banking establishments of all kinds in the United States at approximately 30,000, and of this number something like 28,000 were banks whose business was wholly or partly of a commercial character. These commercial banks were owned for the most part by the residents of the communities in which they were placed, and the business of most of them was chiefly local in character. The great majority of national banks were national in nothing but name. Except for the rather loose association of the banks in the clearing houses of our principal cities and a growing community of interest, most of these banks were independent units, each working for itself. There was little team work. In

times of threatened panic the different parts of the system worked at cross purposes. They were without effective leadership at those times when prompt cooperation under national leadership was urgently needed.

Reserves Scattered

The most serious feature of this decentralization was the scattering of reserves. Thirty thousand different banks meant 30,000 cash reserves, and these reserves for the commercial banks were more than the mere "till money" which the "cash balances" of most foreign banks represent. They were actual reserves, substantial in amount, upon which the banks placed their prime dependence for times of emergency. It is true that most banks had so called "deposited reserves," namely, funds on deposit in other banks, which they were allowed to count as part of their "legal reserves"; and they had so called "secondary reserves," namely, funds invested in securities and call loans, which were supposed to be quick assets that could be liquidated at once in time of need. Strictly speaking, however, neither of these "reserves" was a reserve at all. The deposited reserve was after all merely a deposit in another bank, which the depository bank loaned out—commonly at call on the stock exchange—and

against which it held its own reserve, a reserve which in turn was often further attenuated by being placed on deposit in a third bank, there again to be loaned out on stock exchange collateral. In times of emergency, therefore, the "deposited reserve" could be realized upon only to the extent that call loans could actually be called, and this meant to the extent that stock exchange securities could be sold. Invested "secondary reserves" could be realized upon, likewise, only to the extent that securities could be sold. In times of threatened panic, however, stocks and bonds can not be sold on any extensive scale except at great sacrifices and at the risk of financial collapse. Experience has shown that securities are not sold to any large extent by banks at such times. The losses involved would be too great. The result was that in times of serious danger the banks of the country were forced to rely to a very large extent upon their own cash reserves, which, as a consequence, had to be maintained at a high level—higher than in other advanced countries. This situation gave the vault reserve in American commercial banks an importance not found in the commercial banks of Europe. European joint-stock banks normally carry little cash in vault; they place their reliance for emergency funds directly or indirectly upon the

central banks. In America bank reserves were so scattered and so jealously guarded that in times of threatened panic they were comparatively ineffective in staying the storm. The situation was analogous to what would happen today if after drilling our American army to a high point of fighting efficiency, we should scatter the men in small units all over the United States to protect the country from a threatened invasion. Each community would be jealous of its own squad of soldiers, but the invader would come and the efficiency of our well drilled soldiers would be practically nil. The point of the illustration will be clear to everyone recalling the mad scramble for reserve money on the part of banks throughout the country at the time of the panic of 1907. Our supply of reserve money was large. In fact we had at that time in the United States the largest supply of gold in the world. It was ineffective, however, because widely scattered; hence, suspension of cash payments throughout the country, currency premiums, the breakdown of our domestic exchanges, the illegal issue of millions of dollars of money substitutes, and all the other disgraceful accompaniments of an American panic.

Reserves Immobile

Obviously a country's reserve money must to a large extent be concentrated in one reserve or, at most, in a few large reserves, if it is to be effective. It must be marshalled in armies, not scattered in small squads. But these armies must be mobile so that they can be quickly moved singly or in combinations to places of threatened attack. An army's mobility is a big factor in its efficiency—a truth which the great mobility of the armies of the Central Powers in the recent war has emphasized. Our American bank reserves were not only scattered, they were also immobile. There was no effective way of quickly gathering them together and massing them at the points of financial danger.

These then were the three most serious phases of our banking decentralization: (1) Absence of a responsible national conservator of our money market, like the Bank of France or the Bank of England. (2) Scattered bank reserves. (3) Immobile bank reserves.

CHAPTER III

INELASTICITY OF AMERICAN BANK CREDIT PRIOR TO FEDERAL RESERVE SYSTEM

The second group of defects of the old banking system, defects closely related to those of decentralization, were those of credit inelasticity. A very large part of the country's current business is carried on by means of funds borrowed from commercial banks. These borrowed funds are left on deposit with the banks, and the deposits are circulated by means of checks, the debits and credits of individual accounts being offset in such a way that the total commercial deposits of the country do not normally vary greatly in short periods of time.

Extent to which Bank Credit is Used as a

Medium of Exchange

The point may be illustrated by a few figures, and, inasmuch as conditions have been very abnormal since the outbreak of the European War, the figures used will be those for the year 1913. Reports made to the Comptroller of the Cur-

rency show that on June 4, 1913, the loans and discounts of commercial banks which reported to the Comptroller (exclusive of loans classified as real-estate loans) amounted to approximately $8\frac{1}{4}$ billion dollars. Estimates made by Professor Irving Fisher give a rate of deposit turnover for the United States in 1913 of approximately 54, which means that for each check-deposit balance, maintained in a commercial bank, averaging throughout the year \$1,000, approximately \$54,000 in checks were drawn and paid. The average deposit balance of $8\frac{3}{4}$ billions dollars would mean therefore check transactions to the extent of 54 times $8\frac{3}{4}$ billions dollars or 472 billions dollars in 1913. Investigations made for the National Monetary Commission in 1909 by Professor David Kinley showed that between 80 and 85 per cent of the country's total business was transacted by means of checks. If we accept the latter figure as the more representative one for 1913, we arrive at 83 billions dollars (namely, $15/85$ of the amount of business done by means of checks), as the amount of business in that year performed by means of cash. In June, 1913, of the total amount of money in circulation in the United States, 21 per cent, or \$716 millions consisted of bank notes. Although from the public's point of view bank notes are money, from

the issuing bank's point of view they are a form of bank credit. If we treat them as a form of bank credit, and add to the \$472 billions of check business 21 per cent of the \$83 billions of money business we arrive at approximately 490 billion dollars worth of business in 1913, representing 88 per cent of the country's total business transactions, as the amount performed by means of bank credit—checks and bank notes.

The amount of money and of deposit currency which a country needs to carry on its business, at a price level in equilibrium with the price levels of other countries, depends largely upon the amount of business or of money work to be done. In years of active business a larger supply of circulating media is needed than in years of business depression. Furthermore, in a country like the United States, in which agriculture is a particularly important industry, there are very pronounced seasonal fluctuations in the amount of business to be done, and consequently in the demand for cash and for deposit currency. One important postulate of a good banking system is its capacity to adjust the supply of deposit and bank-note currency to variations in trade demands, increasing it, for example, at the time of the heavy crop-moving demands in the fall and reducing it at the time of the period of inactive

business, which normally sets in shortly after the opening of the new year. Capacity to contract the circulating media when business demands decline is as important as capacity to expand them when these demands increase.

Under the old régime our American bank credit, both note and deposit, was peculiarly inelastic, although the seasonal character of much of the country's business is such as to make credit elasticity a desideratum of unusual importance in the United States.

Bank-Note Inelasticity

Our national bank notes, which should have furnished the elastic element in the country's hand to hand money, were notoriously inelastic. National banks were authorized to issue these notes by depositing with the Government United States bonds equal in par value to the notes issued.¹ The banks were supposed to realize a "double profit" on the bank notes, namely, interest on the bonds, and interest on the notes when they were loaned out as money. After 1900 the bonds used, however, were mostly two per cent bonds of 1930, and as the issue of bank notes

¹ If the market value were below the par value, additional bonds were to be deposited so as to make the market value at least equal to the notes issued. In recent years the market value of these bonds has been usually above the par value.

involved a number of incidental expenses, including a semiannual tax of one-fourth of one per cent upon the amount of notes issued, the double profit was usually not a very substantial one. Inasmuch as not more than \$100 in notes could be issued against \$100 par value of bonds regardless of how high a premium the bonds bore in the market, and inasmuch as the bonds had been in recent years practically always at a substantial premium, the banks usually realized considerably less than $1\frac{1}{2}$ per cent net interest on the bonds. Obviously the higher the premium paid on the bonds, other things equal, the lower the net interest yield; and the lower the premium, the higher the yield. The result was a tendency for the banks to increase their bank-note circulation when the price of bonds declined and to decrease it when the price rose. In other words, the expansion and contraction of the bank-note circulation was not, as it should have been, in response to variations in trade demands, but in response to variations in the price of the government debt. This often gave an inverse elasticity, since the price of government bonds often declined at times when business was slack and the currency was already redundant, and often rose at times when business was active and an increase in the bank-note circulation was desirable. In other

words, the bank-note circulation frequently declined at just the time when business needs demanded an increase, and increased when the business situation called for a decline. The character of these fluctuations will be seen from the following chart.²

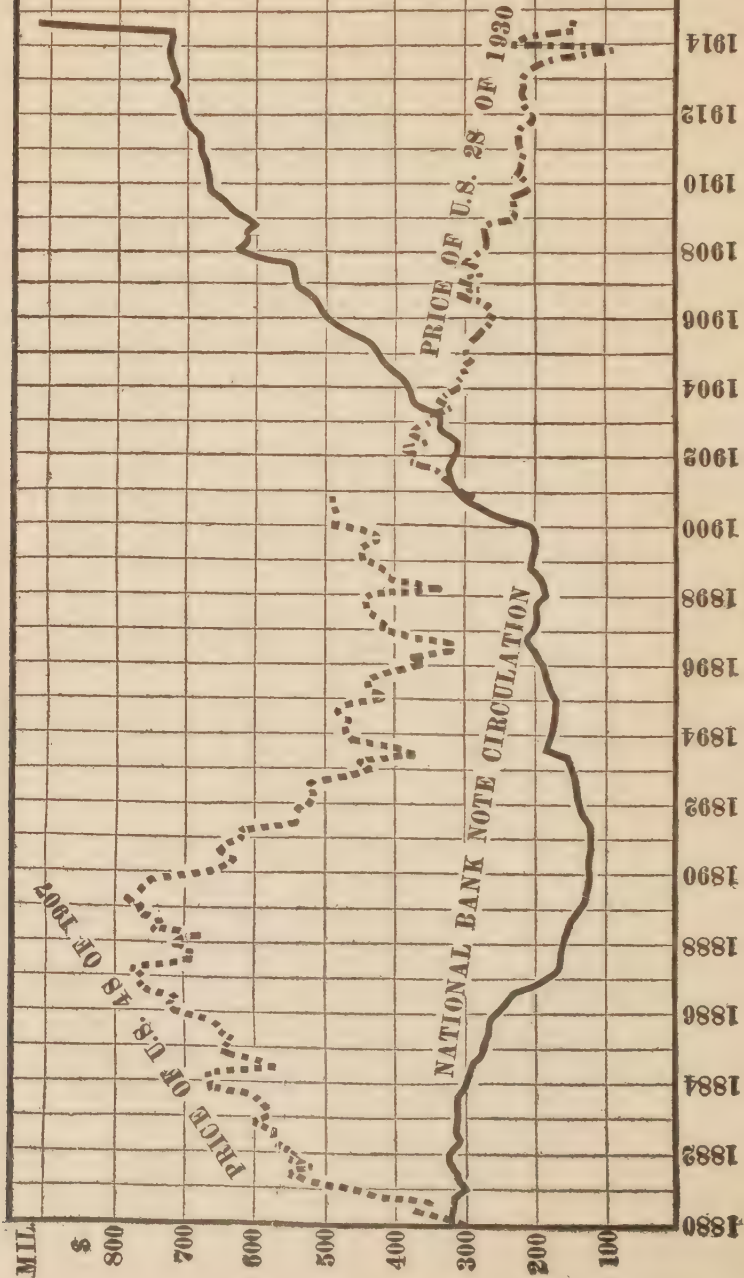
From season to season the bank-note circulation was very irresponsive to varying trade demands. There was considerable delay and red-tape involved in obtaining the necessary bonds, depositing them at Washington and obtaining bank notes for circulation; and these obstacles, together with the expenses involved and the restrictions upon the subsequent retirement of notes once issued,³ made it impracticable for banks to meet temporary needs for additional currency, like those of the crop-moving period, by issuing additional notes. About all that can be said favorable to the seasonal elasticity of the national bank notes is that banks intending to increase permanently their bank-note circulation tended to make the increase in the fall when the demands for currency were normally largest. In the matter of seasonal elasticity our national bank-note

² Figures plotted on the chart do not include the issues of Aldrich-Vreeland emergency notes. See note 4, page 15.

³ Down to May 30, 1908, the law limited the amount of national bank notes that could be withdrawn in any one calendar month to \$3,000,000. On that date the law raised the limit to \$9,000,000.

CIRC.

PRICE



National Bank-note Circulation and Prices of United States Bonds, Dates of Comptroller's Calls 1880-1914

circulation showed up very unfavorably in comparison with the bank-note circulation of Canada, which, under the system of branch banks and an asset bank-note currency, was highly responsive to seasonal variations in currency needs. The contrast will be made clear by the following chart (*Chart II*) showing the variations in the monthly bank-note circulation of the two countries prior to November, 1914, the date when the federal reserve banks were opened.⁴

In times of crisis national bank notes could not be depended upon to provide additional currency. Government bonds were usually difficult to secure on favorable terms at such times, and the machinery for taking out new circulation worked too slowly. Some progress was made in the direction of improving the old system in this regard during the latter years of the old régime; and, under the spur of strong appeals to the banks and active assistance from the Treasury Department, there was some helpful increase in the national bank-note circulation at the times of the panic of 1907 and the crisis of 1914. At best, however,

⁴The figures plotted on the chart do not include the circulation of the so-called Aldrich-Vreeland emergency notes, which were first issued in August, 1914, reached their maximum in October, and were all retired by the following July. Legal authority to issue such emergency notes expired by limitation June 30, 1915. Federal Reserve Act, section 27.

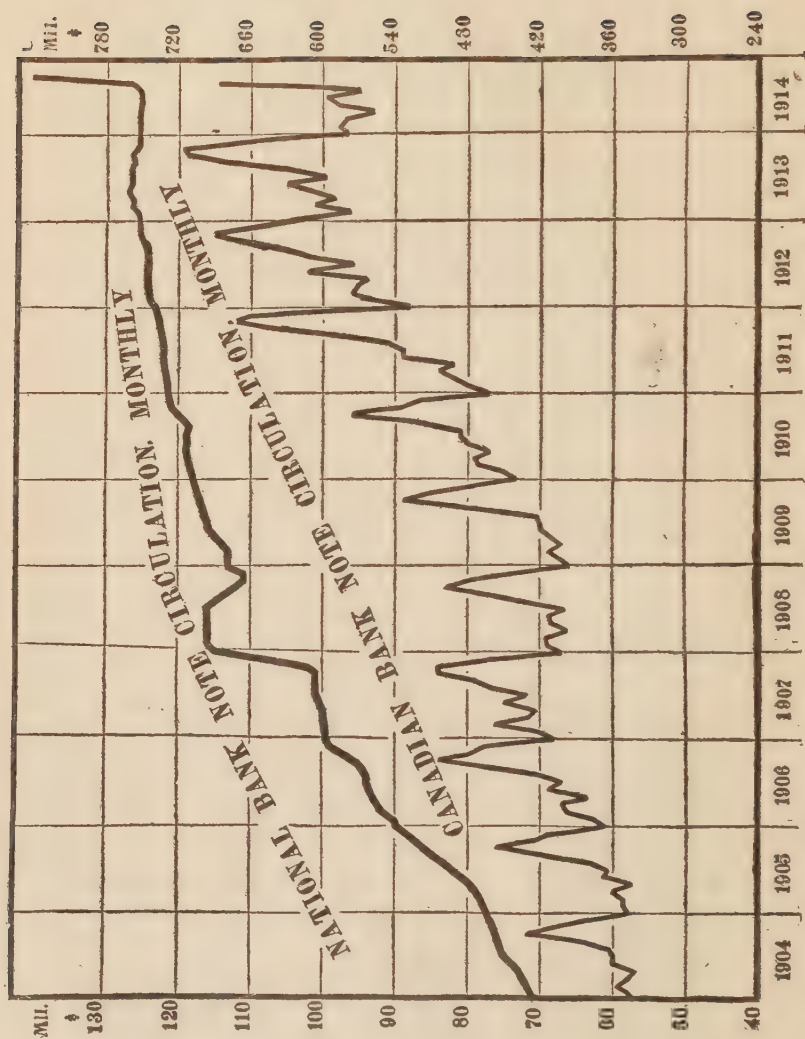


CHART II

Elasticity of Bank-note Circulation in United States and Canada 1904-1914

the bond-secured notes were a weak reed to rest upon in time of crisis.

Inelasticity of Deposit Credit

Our loan and deposit credit was likewise deficient in the quality of elasticity. Rigid legal minima for bank reserves set up an obstacle to loan and deposit expansion at times of increasing business activity. Banks which were "loaned up" and could not make further advances to regular customers of good standing were prevented from loaning their credit to these customers by accepting bills, which the customers might draw upon them, as is the common custom in Europe, because our courts had ruled that bank acceptances were illegal. The rediscount business among our banks was almost negligible, and most of that which existed was done on the quiet and under cover. Rediscounting was frowned upon by bankers and business men, and there was no central institution like the central banks of Europe, whose business it was to rediscount the paper of other banks in times of need. Our American commercial paper was largely local paper and we had comparatively little that could be sold in distant markets, either at home or abroad. In other words, rigidity rather than elasticity was a characteristic feature of our American deposit credit.

Evil Results of Credit Inelasticity

To this defect of credit elasticity coupled with that of decentralization were to be attributed largely the frequent and wide fluctuations in the interest rates on call and short-time loans, for which American money markets were notorious, the alternation of periods of excessive speculation stimulated by redundancy of currency and credit with periods of stringency and liquidation brought on by scarcity. For this rigidity of our credit system the business men and the farmers paid the price of higher interest rates; the farmer suffered through the necessity of selling his staple crops largely in the fall when a tight money market was depressing prices, and of buying his supplies largely in the early spring when easy money conditions tended to make prices abnormally high; the banker was compelled to keep large reserves and to tie up an excessive amount of his commercial deposits in capital investments, such as the purchase of bonds and the making of call loans on stock exchange collateral; while upon all classes in the community an uncertain and unstable money market, which was wont to collapse frequently in panics, imposed the burden of great financial anxiety.

CHAPTER IV

DEFECTIVE EXCHANGE AND TRANSFER SYSTEM

A third group of defects in our old banking system consisted in certain cumbersome features—unnecessary wheels and bolts as it were—in our domestic and foreign exchange mechanism. These features greatly interfered with the efficient operation of the machine and at the same time added to the expense. This subject is a large and complicated one and can only be touched upon here. It may be divided into two parts, that relating to domestic exchange, and that relating to foreign exchange.

Domestic Exchange

Of the hundreds of billions of dollars in checks drawn every year, a very large proportion are for local payments, and, being settled promptly through local clearing houses or directly between the banks concerned, offer no difficulties. Our American clearing house machinery is a marvel of perfection for the settlement of local checks. In addition to the checks drawn for purely local

payments, however, checks whose span of life is but one day and which are born, live and die within the narrow limits of one town or city, there are millions of checks drawn daily for out-of-town payments, checks whose span of life often covers many days and which in the range and speed of their movements excel the proverbial American tourist party in Europe. The supply of these checks that is continually in transit, recently estimated to amount at any one time to about \$300 millions, is what is known among bankers as the "float." The problem of efficiently and cheaply handling this float and of equitably apportioning the expense was for years a perplexing one. Some clearing houses, as for example that of New York, imposed certain definite charges for the collection of checks on points beyond a certain radius from New York City. Other clearing houses imposed no charges. The Boston clearing house developed a system for the parring of checks throughout New England, thereby eliminating all collection charges on items drawn on banks entering the system. Similar devices were adopted in a number of other sections of the country, notably in the middle west. Some cities, like Albany for example, became known as free cities and others were notorious for their high collection charges. Many banks

imposed exchange charges—some high and some low—for the collection of out-of-town checks received over their counters, and some made a charge for the collection of checks drawn upon themselves when presented from out-of-town sources. These practices led among other evils to the practice of routing checks, which means that checks in the process of collection would often be sent by roundabout and devious routes in order to avoid or reduce collection charges. In this way the length of time in which checks were in transit was increased and the economic cost to the community for the collection of checks was made heavier.

One serious phase of the practice of routing checks was the manner in which it padded legal reserves. Competition among large-city banks for the accounts of country banks led the city banks to give an immediate credit to the country banks for out-of-town checks, checks which sometimes took the city bank a week or more to collect. The country bank counted as legal reserve out-of-town checks sent to the reserve city bank for collection as soon as they were mailed. The reserve city bank in turn would send some of these same checks to the central reserve city bank and count them as reserve money as soon as they were put in the mail. In this way one check *in*

transit frequently counted as legal reserve for both a country bank and a reserve city bank. Occasionally such a check, after performing a yeoman service in being counted as legal reserve money by two banks for several days, would be returned as worthless marked "no funds."

Another defect of the domestic exchange system was the expense and trouble, for which it was largely responsible, of requiring heavy shipments of currency back and forth over the country. As previously noted, American money markets are subject to pronounced seasonal swings. At one season of the year the relative demand for bank funds is heaviest in the cotton belt of the south; at another time it is heaviest in the great cereal producing sections of the west and middle west; and at another season it is heaviest in the leading financial centers of the east. This heaviest demand often shifts from one section to another within a very brief period of time. Under our old banking system these shifts carried with them large shipments of currency—shipments amounting in the course of a year to hundreds of millions of dollars—and frequently a shipment would hardly be received and unpacked before a shift in the monetary demand would require it to be sent to another section or perhaps to be returned to the place whence it

came. All this involved expense, including packing, shipping, abrasion, insurance and interest items.

A second phase of the exchange difficulties under the old banking system was that relating to the foreign exchanges.

Foreign Exchange Difficulties

Our foreign trade was financed largely through London, and those parts of the trade which were with the Orient and with South America were financed almost entirely through London. London is the world's financial center and it is but natural that we should utilize to a substantial extent her unrivalled facilities for financing oversea trade. The trouble was not that we utilized them, but that we utilized them too much and were unduly dependent upon them. This involved several difficulties, only two of which need be mentioned here. In the first place, payments through London gave rise to an additional foreign exchange operation, which normally added to both the expense and the risk of financing a shipment of goods. In the second place, the fact that invoices, bills of lading and other documents passed through the hands of foreign banks and of South American or oriental branches of foreign banks gave to our foreign competitors "in-

side" information concerning our foreign business—information that was often used to their advantage in competition with our own citizens.

We now come to the fourth and last of the defects in our old banking system, which were outlined at the beginning of this book. That is a defect which is concerned with the relations of our banking system to the federal treasury.

CHAPTER V

DEFECTIVE BANKING MACHINERY FOR FEDERAL GOVERNMENT

The general funds of the treasury were kept in part in the country's nine sub-treasuries, and in part in national banks, which qualified as depositories of government funds. There were 1,584 such national bank depositories at the close of the fiscal year 1914. The apportionment of the funds between the sub-treasuries and the banks on the one hand, and among the depository banks on the other hand, was entrusted to the Secretary of the Treasury. The treasury funds to be thus apportioned varied widely from year to year and from season to season.

In a number of respects this system worked badly. Briefly summarized, the defects were as follows: (1) It led to the continual hoarding in treasury vaults of large sums of money involving substantial administrative expenses and a heavy loss of interest. (2) At certain seasons of the year the Government's receipts greatly exceed its disbursements, as for example

at the times when tax payments are heaviest; while at other seasons, as for example when pension money or interest on the public debt is being paid, the disbursements exceed the receipts. In the former case the money market was disturbed by the Government's suddenly withdrawing large sums from circulation and thereby contracting the currency. In the latter case it was disturbed by the sudden pumping into circulation of large sums of money. These operations, when on any substantial scale, tended to affect the interest rates on call loans and the prices of speculative securities. The task imposed upon the Secretary of the Treasury, therefore, of apportioning these large government balances among the banks and the sub-treasuries was a difficult one and one which placed too great power and responsibility over the money market in the hands of a government official. It also led to criticism and jealousy among depository banks. (3) The system caused depository banks to rely unduly upon the Secretary of the Treasury for aid in the form of increased government deposits in times of financial pressure, instead of depending upon themselves and keeping "their houses in order" so as to be ready for emergencies. "The grandfatherly attitude of the Secretary of the Treasury toward the banks"

in the matter of government deposits was an expression frequently heard.

The four chief defects of our American banking system as it existed prior to the enactment of the federal reserve law have now been briefly described. They were decentralization, inelasticity of credit, cumbersome transfer system, and defective government depository system. To remedy these defects the federal reserve system was created by the law of December 23, 1913; and federal reserve banks opened their doors for business November 16, 1914. Since that date the system has developed rapidly under the management of administrative boards and under the influence of a number of important amendments to the organic law. It is not our task here to trace this interesting development, but rather to answer briefly the question: How is the federal reserve system as now developed remedying the defects of the old banking system? Let us consider the remedy in its relation to the four general defects in the order in which they have been discussed.

CHAPTER VI

HOW THE FEDERAL RESERVE SYSTEM IS REMEDY- ING THE OLD EVIL OF THE DECENTRAL- IZATION OF AMERICAN BANKING

The federal reserve act does not destroy our American system of small independent banks with its prestige of over a half century of growth and usefulness, and with its great merit of local adaptability to the needs of a country of magnificent distances and of widely varying economic activities. The federal reserve law continues these thousands of independent banks with all their essential functions, but federates them into a unified system which is democratic in its organization and nationwide in its field of operation—a system dedicated to public service.

Federal Reserve Districts

There are twelve federal reserve banks, each of which operates in one of the federal reserve districts into which the country is divided. In determining the boundaries of these districts the authorities were required to have "regard to the

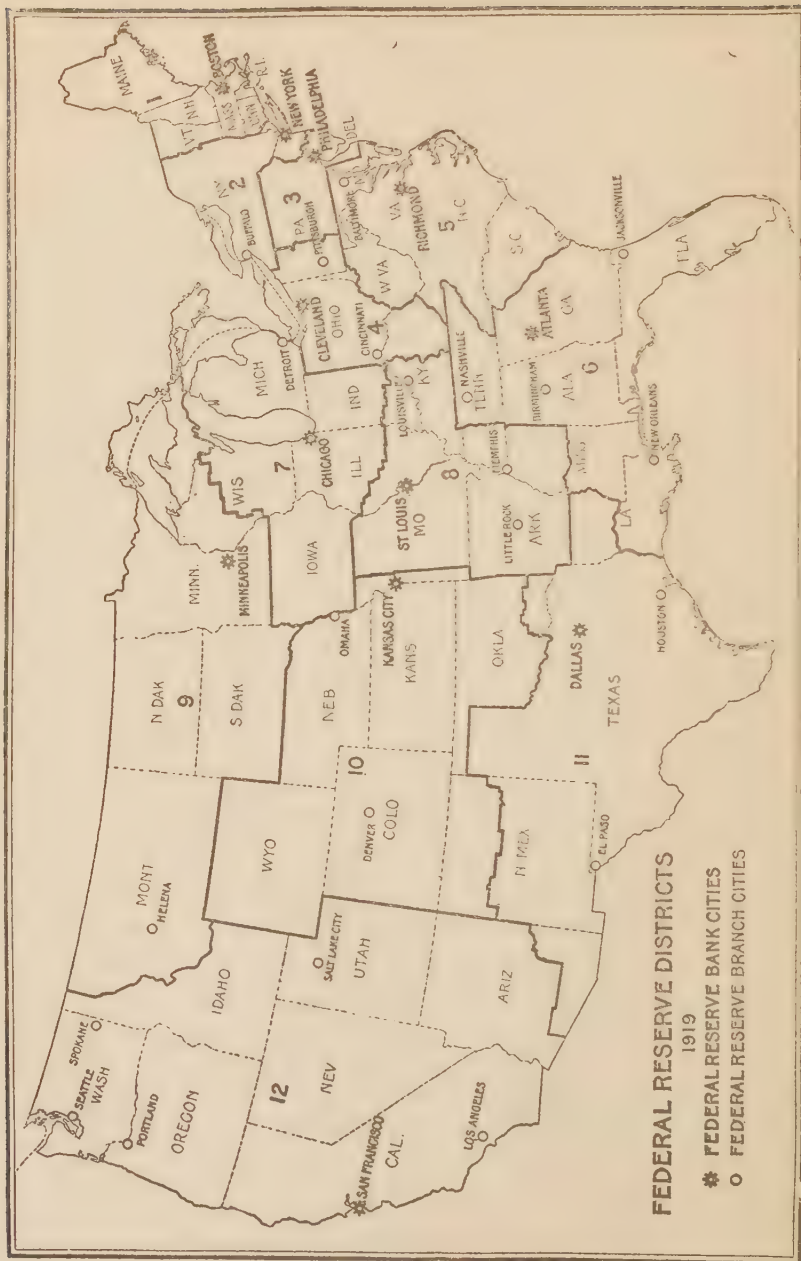
convenience and customary course of business," to make each district large enough to provide the minimum capital of \$4,000,000 required by law, and to make none so large as to dominate the others thereby endangering the federal principle which the law sought to establish. A map showing the boundaries of the twelve federal reserve districts and the location in each district of the federal reserve city, namely, the city in which the main office of the federal reserve bank is located, is given below.¹

The fact that the number of banks and the amount of banking capital in different sections of the country vary so widely explains the great differences in the geographic sizes of the federal reserve districts.

Plan of Organization

All national banks are required to be members of the system, and state banks and trust companies (which conform to certain standards as to size and character of business) are encouraged to join. Comparatively few state institutions joined during the first two years of the system, but the liberal policies of the federal reserve

¹ The map is a reproduction of the one published in the Federal Reserve Bulletin of September, 1919.



authorities, together with later amendments to the law and a growing feeling that it is the patriotic duty of state institutions to join the system in these times of national emergency, these factors have all made the state institutions more favorably disposed toward the system and they have lately been joining in ever increasing numbers.

Member banks are required to subscribe to the capital stock of the federal reserve bank in their district to an amount equal to six per cent of the member bank's capital and surplus. Only one-half of this subscription has so far been called, giving the federal reserve banks a paid-in capital of \$85,140,000 on September 12, 1919, but the other half may be called at any time by the federal reserve authorities.²

There are two noteworthy features of a federal reserve bank's plan of organization. They are first, its democracy, and second, its recognition of the quasi-public nature of the banking business through its grant to the public of participation in the bank's management.

The administrative control of a federal reserve bank is democratic. "One bank, one vote" is the rule. Furthermore, in order to prevent the large

² Provisions for the establishment of federal reserve branch banks are contained in the federal reserve act (section 3). Up to September, 1919, twenty-one branch banks had been established.

banks from dominating the small ones by reason of their greater prestige and to assure the small banks of representation on the board of directors, there is a device by which all the member banks are divided according to their capital into three groups, which, reminiscent of the three bears in the Goldylock story, may be called big banks, little banks, and middle-sized banks. All the member banks in a federal reserve district are classified into these three groups. Each of the groups was originally required to contain approximately the same number of banks, but by the amendment of September 26, 1918 this requirement was discontinued. At present the federal reserve board has authority to determine the number of banks which shall constitute each group, being merely subject to the requirement that "each group shall consist as nearly as may be of banks of similar capitalization." The largest bank in the group of little banks is therefore normally smaller than the smallest one in the group of middle-sized banks, and the largest one in the group of middle-sized banks is normally smaller than the smallest one in the group of big banks. On the basis of the one bank one vote principle, each group elects two directors, one of whom, called a Class A director, is a banker and represents the stock-holding banks, while the other, called a Class B director, is a business man or farmer and

represents the business community. To these six directors so elected there are added three others known as Class C directors, who are appointed by the central federal reserve authorities at Washington to represent the interests of the federal government and of the general public. One of these Class C directors, who is required to be a person of "tested banking experience," is designated by the central authorities as Chairman of the Board, and is known as federal reserve agent. The board thus consists of nine directors, who hold office for three years (the term of office of one director of each class terminating each year), and who are broadly representative of different interests among the American public.

Crowning the arch of which the twelve federal reserve banks constitute the structural stones and forming its keystone, is the central board at Washington, known as the federal reserve board. This board consists of seven members, including the Secretary of the Treasury and the Comptroller of the Currency, who are ex-officio members, and five members appointed by the President of the United States with the advice and consent of the Senate, who hold office for a period of ten years. At least two of these five members the law says must be "experienced in banking or finance." The Secretary of the Treasury is ex-officio chairman of the federal reserve board. The

board is assisted by a federal advisory council, consisting of twelve members appointed respectively by the boards of directors of the twelve federal reserve banks. The advisory council meets with the federal reserve board at least four times each year and oftener if called by the board.

The appointment by the federal reserve board of three of the nine directors (including the chairman) of each of the federal reserve banks and the appointment by each federal reserve bank of a member of the federal advisory council federate together the twelve federal reserve banks under the federal reserve board and give a common knowledge and a unity of purpose. Conferences from time to time of the governors of the twelve federal reserve banks and of the federal reserve agents of the banks, and occasional conferences of the governors and the federal reserve agents with the federal reserve board have added much to the smooth and unified working of the system. In matters of general policy the federal reserve board is given large powers and is the directing head of the system.³

Here then is the centralizing machinery which is bringing order into our banking system, and

³ The board's control is strengthened by its statutory powers: (1) "To examine at its discretion the accounts, books and affairs of each federal reserve bank and of each member bank and to require such statements and reports as it may deem necessary. . ."

is making possible the development of broad financial policies which can be carried out with promptness and continuity.

In considering the manner in which the old evil of decentralization is being remedied by the federal reserve system, we may now pass from the administrative machinery of centralization to the methods by which the old evils of scattered and immobile reserves are being eliminated.

District Centralization of Bank Reserves

The federal reserve act as originally passed provided for the gradual withdrawal of legal reserve money from deposit in the banks of reserve and central reserve cities. All such deposited legal reserves were to be withdrawn by the end of a three-year period beginning with the date of the inauguration of the federal reserve system. Accordingly, after November 16, 1917, all legal reserve money of member banks, the law required to be held "in the vaults of the member banks or in the federal reserve bank, or in both, at the option of the member bank" (section 19 of Act). In conformity with this requirement

(2) "To suspend or remove any officer or director of any federal reserve bank. . ." (3) "To suspend, for the violation of any of the provisions of this act, the operations of any federal reserve bank, to take possession thereof, administer the same during the period of suspension, and, when deemed advisable, to liquidate or reorganize such bank." (4) "To exercise general supervision over said federal reserve banks." Federal Reserve Act, Section 11.

the percentage of the legal reserves of member banks kept on deposit in the banks of reserve and central reserve cities declined very much by the summer of 1917. On June 21, 1917, an amendment was passed to the federal reserve act requiring every bank, banking association or trust company belonging to the federal reserve system to maintain its entire legal reserve in the form of a deposit at the federal reserve bank of its district. Thus by about five months the time was anticipated when legal reserve money of member banks should cease to be kept on deposit in banks other than federal reserve banks. The time therefore arrived in the summer of 1917 when commercial banks belonging to the federal reserve system ceased tying up their legal reserve money by depositing it in the banks of our money market centers there to be loaned out at call to speculators on the stock and produce exchanges. This divorcing of the legal reserves of nearly 8,000 commercial banks from the speculative and capital loans of the stock market—mainly that of Wall Street—is one of the big achievements of the federal reserve system. The federal reserve law, as amended, recognizes only one form of legal reserve, and that is a member bank's deposit in its federal reserve bank. Member banks may keep as much or as little cash on hand for till money as they wish to. They may keep bal-

ances in other banks if it suits their convenience to do so—all that is their own affair for which their responsibility is to their stock holders and their customers—but their legal reserve, the reserve which the Government looks upon as the minimum below which the public interest demands that banks should not go, that reserve must all be kept on deposit in federal reserve banks, the nation's reservoirs of reserve money.

For reasons that will soon be made clear the concentration of the country's reserve money in a few large reservoirs makes possible a much more efficient use of each dollar of reserve money than under the old system of scattered reserves, and, as a result, the legal reserve requirements have been greatly reduced. The percentage reserves at present required against demand deposits and time deposits are as follows:⁴

Banks	Demand Deposits, i.e., Deposits Pay- able Within	Time Deposits, i.e., Deposits Pay- able After 30
	30 Days	Days Notice
Central reserve city banks,	13	3
Reserve city banks,	10	3
Country banks,	7	3

⁴ Banks located in the outlying districts of a central reserve city or a reserve city, or banks located in territory added to such a city by the extension of its corporate charter, may, upon the affirmative vote of five members of the federal reserve board, reduce their legal reserves to the percentages required of country banks. In the case of banks located in central reserve cities the reduction may be authorized to the percentage required of country banks or merely to that required of reserve city banks.

On November 1, 1918, the twelve federal reserve banks held deposited reserves of other banks to the amount of \$1,442 millions. Reserve money collected in a few large reservoirs is quickly available in large quantities either for export or for domestic use, and the fact that it is readily available in large quantities inspires public confidence and lessens the danger of financial panic. When the public knows that gold in abundance is available on demand it does not want it, except to meet the normal demands of international trade. The federal reserve banks, of course, do not keep on hand all the reserve money deposited by member banks. Like other banks, they invest it. The law, however, requires them to keep a reserve of thirty-five per cent against deposits,⁵ and it is their established policy to maintain reserves much larger than this normal legal minimum.

Mobilization of Reserves

A corollary to the district centralization of reserves is their mobilization. Reserve money must not only be piped into a few large reservoirs, but these large reservoirs must be piped together, and there must be a pumping engine of sufficient power to force the reserves promptly and in large quantities to any place desired. The federal re-

⁵ See pages 58-60.

serve system creates just this machinery. It provides numerous devices by which reserve money can be quickly moved from places of redundancy to places of scarcity. A few of the more important of these devices will be briefly described here, while others will be discussed later in connection with the general topics of currency and credit elasticity and the transfer system. Let us consider first the inter-district mobility of reserve money, namely the movability of reserves from one federal reserve district to another; and second, the intra-district mobility of reserves, or the movability of reserves within the boundaries of one district.

Inter-District Mobility

Broadly speaking there are three ways in which the federal reserve law has increased the inter-district mobility of reserve money. They are: (1) Rediscounting by one federal reserve bank for another. (2) Open market operations of federal reserve banks. (3) Creation of a broader discount market for commercial paper.

Rediscounting by one Federal Reserve Bank for Another

Under the old banking system, as we have seen, in time of emergency, each bank held tight its own reserves, or, to change the figure, "sat firmly on the lid." In the controversy for banking re-

form, which culminated in the federal reserve act, the advocates of a single central bank contended that a system of eight to twelve banks like that proposed in the federal reserve bill would perpetuate the old evil by leading to the same sort of scramble for reserves, in time of emergency, among the different federal reserve banks, that had formerly existed among the individual banks of the country. Specifically to meet this danger a provision was inserted in the act (Section II) empowering the federal reserve board "to permit, or, on the affirmative vote of at least five members of the reserve board to require federal reserve banks to rediscount the discounted paper of other federal reserve banks at rates of interest to be fixed by the federal reserve board." This means that in case there is an exceptionally heavy demand for reserve money in any section of the country—a demand heavier than the banks of that section can reasonably meet—the reserve banks in other sections where money is more plentiful will come to the rescue, either voluntarily or under compulsion of the federal reserve board, and will rediscount the paper of the reserve bank in the section under financial stress. This process, of course, will cause a flow of cash from the reserves of the former banks to the reserve of the latter, thereby easing the money market in the threatened section.

After the United States entered the war there developed a strong tendency for a compensatory movement of reserves among the federal reserve banks. Reserves of some of the banks frequently fall rapidly while those of others are rapidly rising, often with little or no change in the reserve position of the twelve federal reserve banks as a whole. This compensatory movement is due largely to operations of the government which often result in heavy withdrawals of funds from banks in one section of the country for the making of payments in another. This situation has made it desirable from time to time that one federal reserve bank should make advances to another. At times the federal reserve board has taken the initiative in this matter, but apparently the banks, in most cases, have willingly complied with the board's request. The twelve federal reserve banks have so far worked very harmoniously, thanks largely to the frequent conferences of the governors and the federal reserve agents both among themselves and with the federal reserve board, so that it seems improbable that compulsion by the board will often be necessary to require the more favorably situated banks to come to the rescue of those less favorably situated, in time of danger. The reserves of the twelve reserve banks are so closely piped together, particularly since the formation of the gold settle-

ment fund (to be described later, pages 75-78), that they may reasonably be considered to be closely connected tanks of a single large reservoir.

Open-Market Operations

While the federal reserve banks are essentially bankers' banks, since their stock is owned exclusively by member banks and since their only regular domestic customers are banks and the federal government, it is none the less true that Congress found it necessary to confer upon these banks certain limited rights of dealing with the outside public. The possession of such rights by the federal reserve banks appeared necessary, first, as part of the machinery for conserving the American money market and making their discount rates effective⁶ and second, as a method of profitably employing their funds in times of easy money, when member banks are making few calls

⁶ If, for example, a federal reserve bank raises its discount rate in order to prevent dangerous loan expansion on the part of member banks or to prevent an undue outflow of gold from the country, it may happen that the member banks may not be convinced of the need of such precautionary measures, and, not being in need of securing funds from the federal reserve bank by way of rediscount, may ignore the efforts of the federal reserve bank to conserve the money market. The banks may accordingly continue the policy of loan expansion at low discount rates. Under such circumstances the federal reserve rate would be said to be "ineffective." To meet this situation and force the banks "into line" the federal reserve bank may go into the open market and sell bank acceptances, commercial bills, municipal warrants and government bonds, and, by withdrawing from the market the

upon them for rediscount.⁷ The dealings with the outside public so authorized are known as "open-market operations," and are provided for in section 14 of the Act. Into the details of this important section we need not go. For our purposes it is sufficient to note that federal reserve banks may buy and sell in the open market either at home or abroad commercial bills of exchange, bankers' acceptances, and certain specified kinds of government obligations. Under this authority a federal reserve bank in one section of the country may buy and sell eligible commercial paper and government securities in any other section of the country. Such dealings, of course, tend to cause a flow of reserve money from the district of the buyer to that of the seller. If the San Francisco federal reserve bank, for example, buys \$1,000,000 worth of trade acceptances, bank acceptances and municipal warrants in the open market in New York, its settlement check to whomever paid is likely to be deposited in a New York bank, and for that bank to be collected by funds received in payment therefor, may tighten the market, and force up the discount rate thereby bringing the market rate into harmony with the federal reserve rate.

⁷ In the early days of the federal reserve system when the member banks were making very little call upon the federal reserve banks for rediscounts or other advances, the federal reserve banks invested substantial sums in municipal warrants and bank acceptances in the open market, and by that means covered a large part of their running expenses.

the New York federal reserve bank from the San Francisco federal reserve bank. Unless offset by payments in the other direction, the payment by San Francisco will necessitate a transfer of reserve money, presumably through the "gold settlement fund,"⁸ from San Francisco to New York. If the New York bank, in which the million dollar check was originally deposited, leaves the proceeds on deposit with the New York federal reserve bank, federal reserve "reserve money" will be transferred from the bank in San Francisco to the bank in New York. In this manner open market operations transfer reserve money from places of redundancy to places of scarcity, and tend to maintain a national equilibrium in our money rates.

Creation of a Broader Discount Market for Commercial Paper

The third method by which the federal reserve system is rendering more mobile our reserve money is through the creation of a broader discount market for commercial paper. As we have already seen, under the old banking system the great bulk of American commercial paper was essentially local paper with little or no market outside of the community in which it was created. The federal reserve system has provided the

⁸ The gold settlement fund is described on pages 75-78.

machinery by which high grade commercial paper can be rediscounted throughout the United States, and, in this connection, has sought to encourage by preferential discount rates and otherwise the use of trade acceptances and bank acceptances—credit devices widely used in Europe.

When the seller of merchandise draws a trade bill upon the buyer at, say, 60 days sight for the amount of the bill, and the buyer writes across its face "accepted" and signs his name with the date of acceptance, a credit instrument is created which has very pronounced advantages over the open-book account, from the standpoint of the seller, the buyer and the bank. The seller has a definite acceptance of the goods which the buyer cannot question in the future without very good reason; he has a promise from the buyer to pay at a definite date; and he has the buyer's obligation expressed in the form of a negotiable instrument which is highly liquid, and which enjoys preferential rediscount rates at all federal reserve banks and therefore presumably at the seller's local bank and in the open market. The buyer of the merchandise who accepts the bill places his credit standing at a higher level than it would be if he bought on open book account. His improved credit should enable him to buy on better terms. Having his accounts thus given definite maturities he is less likely to be tempted to overbuy than

he would be under the loose open-book account method. The buyer is also a seller, and if he uses trade acceptances in connection with his purchases he is in a stronger position to demand them in connection with his sales. From the banker's point of view the trade acceptance is an ideal form of commercial paper. It bears two names, usually carries with it evidence that it represents a self-liquidating commercial transaction and not an accommodation loan, it is almost certain to be paid at maturity and not to seek renewal, is not subject to the provision of the national banking law which prohibits a national bank from loaning to one customer an amount in excess of ten per cent of the bank's capital and surplus (Revised statutes, section 5200), and it is very easy to turn into cash before maturity either by sale in the open market or by rediscount at a federal reserve bank because of the preferential discount rates given such paper. The trade acceptance is therefore incomparably more liquid than the open-book account, and, other things equal, is more liquid than one-name paper.

Even more liquid than the trade acceptance, because the acceptor is ordinarily of more widely recognized financial standing, is the domestic bank acceptance authorized by the federal reserve law.⁹ The bank acceptance is similar to the

⁹ The statutory provisions concerning bank acceptances will be found in section 13, paragraph 5 of the federal reserve act.

trade acceptance. It differs, however, in the fact that the seller of the merchandise draws his bill not upon the buyer but upon the buyer's bank, which accepts the bill for the buyer whose financial standing is known to the bank and who has arranged with the bank in advance to lend him its credit in this way. The seller of the merchandise having received an acceptance of the bill from the buyer's bank may discount the bill at his own bank or sell it in the open market if he does not wish to hold it until maturity. The type of domestic bank acceptance made eligible for rediscount at federal reserve banks covers bills having not more than 90 days, exclusive of days of grace, to run which grow out of transactions involving the domestic shipment of goods, provided that documents conveying or securing title are attached at the time of acceptance; and it covers bills not exceeding the above-mentioned maturity which are secured at the time of acceptance by a warehouse receipt or other such document conveying or securing title covering readily marketable staples.

Inasmuch as bank acceptances and high grade trade acceptances, enjoying as they do preferential rates of discount at the federal reserve banks, have a wide market, their increasing use is causing more and more paper to flow away from the banks in sections of the country where the dis-

count rate is relatively high to be discounted in the banks of those sections where the rate is relatively low. Such a flow of commercial paper from the dear markets to the cheap ones, obviously causes a counter-flow of bank reserves from the cheap markets to the dear ones and thereby tends to reestablish an equilibrium in discount rates. Of course, this flow is not an absolutely free one and perfect equilibrium is never obtained. The point is, however, that the widening marketability of our commercial paper under the federal reserve system is making this flow of reserve money much less sluggish than it was formerly.

Intra-District Mobility of Reserves

The forces, which act for the increasing mobility of reserve money within the boundaries of a federal reserve district, are essentially the same as those just explained for that between districts. Obviously paper of wide acceptability flows from place to place within a district more freely than paper whose merits are less widely recognized; and, within a district as between districts, the widely marketable paper flows from the places where discount rates are high and bank funds are scarce to the places where the rates are low and funds are more plentiful. Furthermore, the bank reserves of the district which have been

pipcd to the one reservoir, namely, the federal reserve bank, can be readily pumped to the banks of any section where funds are in heavy demand. If banks throughout the district were rediscounting in moderate sums with the federal reserve bank, and if a sudden emergency should cause an exceptionally heavy demand for funds in any section, the federal reserve bank could raise its rate of discount, thereby reducing the rediscount demands of the banks less urgently in need of funds, and could then turn larger amounts into the section where the demand was heaviest. Additional funds could be secured by the federal reserve bank within the district (as well as outside) by the sale in the open market of securities held in its "secondary reserve."

In the illustrations so far given we have assumed a fixed amount of banking funds, and have shown how these funds can be readily mobilized under the federal reserve system and concentrated at the points where they are most needed. The problem of meeting unusual calls for banking funds is, however, an easier one under the federal reserve system than the above discussion implies. The reason is that under the new system there exist in addition certain elastic elements in our supply of bank funds. These will be considered in the next chapter.

CHAPTER VII

CREDIT ELASTICITY UNDER THE FEDERAL RESERVE SYSTEM

Both bank-note currency and deposit or check currency are more elastic under the new system than under the old.

Bond-Secured Bank Notes

In order to prevent the alleged danger of an undue contraction of the currency and to protect from loss the banks owning the two per cent bonds, which were largely pledged with the Government as security for national bank-note circulation and which by reason of the circulation privilege had a value far above their investment value, the Government decided not to withdraw from circulation at once the old bond-secured bank notes. The federal reserve law accordingly continued the circulation of these notes, but contained provisions looking toward their gradual retirement. From the time of the enactment of the federal reserve act (December 23, 1913) to February 1, 1920, the national bank notes in cir-

circulation were only reduced, however, from \$726 millions representing about 21 per cent of our total monetary circulation to \$655 millions, representing about 11 per cent. To this sum there should be added, to be accurate, \$201 millions of so-called federal reserve bank notes which are merely bank notes of the old type that are issued by the federal reserve banks instead of by the national banks. They are secured by a specific deposit, with the United States treasurer, of bonds or of certain short-time obligations of the United States. Up to the early fall of 1918 these federal reserve bank notes were of comparatively little consequence, but with the gradual substitution of them, for silver certificates and silver dollars in circulation, since that time, under the provisions of the act of April 23, 1918, they have been assuming increasing importance.

Federal Reserve Notes

The notes upon which the federal reserve system places its sole reliance for bank-note elasticity are the so-called federal reserve notes. These notes, which are obligations of the United States Government and are "first and paramount lien on all the assets" of the issuing federal reserve banks, have back of them specifically pledged with the federal reserve agent to the

amount of 100 per cent certain forms of high grade collateral. This collateral may consist of: (1) Paper endorsed by member banks and drawn for strictly commercial, industrial or agricultural purposes, or for the purpose of carrying or trading in securities of the United States Government, in other words, paper of the type hereafter described¹ which is eligible for rediscount at a federal reserve bank. (2) Bills of exchange endorsed by a member bank and bankers' acceptances bought by the federal reserve bank in the open market. (3) Gold and gold certificates.

Except under special circumstances, to be considered later,² a gold reserve of not less than 40 per cent must be kept by each federal reserve bank against its outstanding federal reserve notes. Gold specifically pledged with the federal reserve agent as collateral for the notes may be counted in making up this 40 per cent reserve, as may also gold kept in the redemption fund with the treasurer of the United States at Washington for the redemption of the notes.

Elasticity of Federal Reserve Notes

As regards the matter of elasticity, these notes have in a high degree the quality of expansibil-

¹ Pages 61-63.

² Pages 53-54.

ity, namely, of having their circulation easily increased in times of need. If member banks in a given section of the country need an increased supply of currency to meet local demands, they may rediscount eligible paper with their federal reserve bank and take the proceeds of the rediscounts in federal reserve notes, which pass readily as hand-to-hand money and are satisfactory till money for the banks. The federal reserve bank, if its supply of notes is inadequate, secures, on application to the federal reserve agent, additional notes by depositing with the agent the rediscounted paper or other eligible paper in its portfolio. This process may continue as long as the federal reserve bank has paper available for deposit with the federal reserve agent and its gold reserve does not fall below the normal legal minimum of 40 per cent. In case of great emergency, however, the federal reserve board may permit a reduction of the note reserve below 40 per cent, provided it imposes a graduated tax upon the amount of the deficiency—a tax which must be added to the rates of interest and discount fixed by the federal reserve board. Furthermore, to meet extreme emergencies the board is authorized “to suspend for a period not exceeding thirty days, and from time to time to renew such suspension for periods not exceeding fifteen

days any reserve requirement" specified by the Act. It is thus seen that the federal reserve notes have ample power of expansion in time of emergency and that there no longer exists a stone-wall limit beyond which expansion cannot go and go promptly. There is no fixed limit, but beyond a certain point further expansion can be secured only at a rapidly increasing expense to those wishing the notes.

The notes issued by federal reserve agents to the twelve federal reserve banks amounted to \$3,222 millions on February 20, 1920. Back of these notes there was held by the twelve federal reserve agents the following collateral:

	Millions
(1) Gold coin and certificates.....	\$241
(2) Gold in redemption fund at Washington	103
(3) Gold with federal reserve board	807
(4) Eligible paper, (representing \$763 millions above the minimum required by law)	2,834

Total\$3,985

The figures show that 36 per cent of the federal reserve notes issued were backed dollar for dollar by gold collateral. The total gold resources of the twelve federal reserve banks on

the above date were \$1,970 millions, which on the basis of the 40 per cent reserve required by law would represent a gold reserve sufficient for a circulation of \$3,526 millions federal reserve notes, after setting aside the legal minimum lawful money reserve of 35 per cent against deposits. This would increase by about 18 per cent the amount of federal reserve notes in actual circulation on February 20, 1920. Obviously there still resides in the federal reserve system some power of note expansion—a power which, in the present conditions of currency and credit inflation, should be used, if at all, with extreme caution.

For the purpose of contracting the circulation of federal reserve notes when the business demands for currency decline, the machinery is as follows. When the demand for notes in the pockets of the people and the tills of merchants falls off, as it does, say, after the harvesting season in the autumn, the surplus notes are deposited by the public in the banks. Inasmuch as national banks cannot count these notes in their vaults as legal reserve money, they will tend to send to their federal reserve banks for deposit any notes they receive in excess of the amount needed for till money. Notes which were issued by the federal reserve bank of the district may thus be withdrawn from circulation. Notes so received which

were issued by other federal reserve banks are sent back to the issuing banks. On this subject the law says: "Whenever federal reserve notes issued through one federal reserve bank shall be received by another federal reserve bank, they shall be promptly returned for credit or redemption to the federal reserve bank through which they were originally issued or, upon direction of such federal reserve bank, they shall be forwarded direct to the Treasurer of the United States, to be retired. No federal reserve bank shall pay out notes issued through another under penalty of a tax of ten per centum upon the face value of notes so paid out" (Section 16). This requirement that federal reserve banks shall send back promptly the notes of other federal reserve banks will obviously increase in its effectiveness as a means of currency contraction with the increase in the number of branches of federal reserve banks established throughout the country.

Another device calculated to encourage the retirement from circulation of bank notes whenever they become redundant is the provision of the law authorizing the federal reserve board to charge such a rate of interest as it may deem desirable on federal reserve notes uncovered by gold or gold certificates issued to federal reserve banks.

The fact that federal reserve notes are not legal tender is believed by some to exercise an influence in the direction of causing their retirement when they become redundant. In view of the fact, however, that the question of legal tender is rarely raised in connection with money which is not depreciated, it is doubtful if the lack of legal tender adds anything to the "homing quality" of the notes.

Elasticity of Deposit Currency

Elasticity of deposit currency, although it has not received the attention in our economic literature received by elasticity of bank-note currency, is of greater importance because the amount of business done by means of deposit currency is many times larger than that done by means of bank notes.³ Prior to the establishment of the federal reserve system, as we have seen,⁴ our deposit currency, although not as inelastic as

³ The estimates of Professor Irving Fisher give for the year 1913, the last antebellum year, the average rate of monetary turnover for the country as 21, and the total amount of business effected by deposit currency as \$440 billion. The bank-note circulation for July 1 of that year was \$759 million, which multiplied by the average rate of monetary turnover would give the total business transacted by means of bank notes as \$16 billion, or a sum equal to only 1/27 of that transacted by means of deposit currency.

⁴ See pages 17-18.

our bank-note currency, was none the less deficient in the quality of elasticity. How has the federal reserve system remedied this defect?

We have just seen how by increasing the mobility of bank reserves, the federal reserve system has enabled bank funds in the form of deposit credits to flow quickly to any section of the country where bank funds are much needed. This mobility of funds is often spoken of as deposit-credit elasticity. In the present discussion, however, we are using the word elasticity in its stricter sense of "expansibility and contractility," and do not include in the term mere mobility of funds, namely, their capacity to move quickly and with little friction from one place to another.

The federal reserve system increases the elasticity of our deposit currency in a number of ways. In the first place, it has removed the rigid legal reserve requirements of our former national banking system and has put in their place much less rigid ones. The only legal reserves now required of national banks are the deposited reserves in the federal reserve bank. For till money banks are permitted to hold in their own vaults as much or as little money as they individually need, and the kinds of money they desire.

Federal reserve banks in turn are required to keep against deposits a legal reserve of lawful

money equivalent to 35 per cent. Unlike member banks, however, the federal reserve banks are not strongly pressed by competition and by the desire for profits to take up all the slack and reduce their reserves in ordinary times to this normal legal minimum. There has been no evidence that federal reserve banks will keep their credit extended to the legal limit, as individual banks have so widely done in the past. Despite the urgent need of funds brought about by war conditions, our federal reserve banks have adopted the policy of maintaining reserves well above the legal minimum. They have little profiteering motive to reduce their reserves to a dangerously low figure, because all the profits of federal reserve banks above a six per cent cumulative dividend to the stock owned by member banks go to the Government.⁵ Fortunately there has ap-

⁵The law (as amended March 3, 1919) provides that after the 6 per cent cumulative dividend claims have been met, the net earnings of each bank shall be paid to the United States as a franchise tax; except that the whole of such net earnings shall be paid into a surplus fund until the surplus shall amount to 100 per cent of the subscribed capital stock. After this 100 per cent surplus is accumulated, 10 per cent of the net earnings, above 6 per cent dividend charges is to be added annually to the surplus. Upon the liquidation of a federal reserve bank or the withdrawal of a member bank none of this surplus goes to the member banks. Ultimately it all goes to the Government.

Although the federal reserve banks are administered with the primary object of public service rather than profit, they have none the less realized good profits on the capital invested. For the year 1917 the net earnings for all 12 banks represented 18.9 per cent of the average paid-in capital, for the year 1918 72.6 per cent, and for the year 1919 98.2 per cent.

peared no evidence of competition among the federal reserve banks to see which can show the largest profits. Under the leadership of the federal reserve board, the great emphasis has been on competition for public service. The result is that the federal reserve banks have been conserving their strength for times of emergency. Under such circumstances the federal reserve banks should have substantial powers of credit expansion to call upon in times of emergency, before their reserve position is forced down to anything like the 35 per cent legal limit.

This limit itself, however, is not a rigid one. It may be passed in times of extreme emergency, although only by paying a price. The federal reserve law provides, as we have previously noted, that the federal reserve board may "suspend for a period not exceeding thirty days, and from time to time . . . renew such suspension for periods not exceeding fifteen days, any reserve requirement specified in this act: *provided*, that it shall establish a graduated tax upon the amounts by which the reserve requirements" against deposits are permitted to fall below the level of 35 per cent (Section 11). Inasmuch as this tax would presumably be added to the rate of discount charged by the reserve bank, there would be an increasingly heavy charge upon loans made when the reserve was below the normal legal minimum. None the less, such loans could be

made without limit to those who could give the security and would pay the price.

The most important device of the federal reserve system for securing elasticity of deposit currency, as well as of bank-note currency,⁶ is found in the machinery enabling member banks to borrow funds of their federal reserve bank. Funds so borrowed, when left on deposit with the federal reserve bank, serve as legal reserve money for the member banks. The making of such loans to member banks is one of the chief functions of federal reserve banks. Broadly speaking the loans are of two kinds, rediscounts, and loans on collateral. Let us consider briefly each of these types of loans.

Rediscount

Federal reserve banks always stand ready to rediscount in time of need eligible paper for member banks.

⁶ A member bank, say a country bank, whose reserve is in danger of running below the 7 per cent of demand deposits, and 3 per cent of time deposits, required by law, or which is in need of more cash for till money, may take, say \$10,000 of its eligible commercial paper to its federal reserve bank and have it rediscounted for, say, 60 days at $4\frac{1}{2}$ per cent. The proceeds would be \$9,925, which at 7 per cent would represent a legal reserve sufficient for \$141,714 of demand deposits, and would therefore greatly increase the bank's lending power. Any part of the proceeds of the rediscount in excess of that needed to maintain the bank's 7 per cent legal reserve with the federal reserve bank could be checked against and taken in cash, presumably in federal reserve notes, for the bank's till money.

For the purpose of keeping the assets of federal reserve banks liquid, the law and the administrative regulations of the federal reserve authorities place rigid limitations upon the kinds of paper eligible for rediscount. These limitations have reference both to the length of time the paper is to run, and to the purpose for which it is issued. As to time, notes rediscounted must have a maturity at the time of rediscount of not more than 90 days (exclusive of days of grace); except that a limited amount of bills drawn for agricultural purposes or based on live stock may be rediscounted, provided they have a maturity not exceeding six months (exclusive of days of grace). As to the purpose for which the bills are issued, the law limits rediscounts to two classes of paper. They are: (1) Notes, drafts and bills of exchange bearing the endorsement of a member bank and "arising out of actual commercial transactions," that is, issued or drawn "for agricultural, industrial, or commercial purposes, or the proceeds of which have been used, or are to be used for such purposes"; and (2) Notes, drafts and bills of exchange bearing the endorsement of a member bank and issued or drawn for the purpose of carrying or trading in "bonds and notes of the Government of the United States." Except for United States Government securities, the law specifically prohibits the rediscounting

by federal reserve banks of paper issued or drawn "for the purpose of carrying or trading in stocks, bonds, or other investment securities."

Collateral Loans

The second type of loan is the discount of collateral notes of member banks. These notes must be for periods not exceeding fifteen days, and the only permissible collateral is "such notes, drafts, bills of exchange, or bankers' acceptances as are eligible for rediscount or for purchase by federal reserve banks," and bonds or notes of the United States Government. There was no provision in the original act for collateral loans, but experience soon showed that member banks frequently wished to secure from federal reserve banks advances for brief periods, so brief that they were reluctant to rediscount customers' paper for the purpose. To meet the difficulty an amendment to the federal reserve act was passed September 7, 1916, authorizing these short-time collateral loans. The authority to make such loans has proven to be particularly useful in connection with the financing by the banks of Liberty bond purchases either for themselves or for their customers—purchases which are likely to involve heavy drains upon the banks for very brief periods. During the years 1917, 1918, and 1919

these collateral loans have constituted by far the most important form of advance made by federal reserve banks to member banks. The great bulk of them are secured by United States certificates of indebtedness and Liberty bonds.

Contraction of Circulating Credit

So far we have been speaking of the elasticity of deposit currency under the new banking system in the direction of expansion in times of increasing currency demand. The contraction of deposit currency, as soon as the need for it falls off, is brought about by the pressure of high discount rates, to which the pressure of the graduated tax is added. This double pressure encourages borrowers to pay off their loans. This fact, and the increasing restrictions which federal reserve banks place upon rediscounts as money market conditions become easier, tend to contract the circulation of deposit currency and restore the reserves to a normal condition. In this respect a great public responsibility rests upon the federal reserve authorities to conserve the banking strength of the country in times of easy money, so that it can be called upon in times of emergency. Some critics of the federal reserve system believe that the machinery it provides for contracting both deposit and bank-

note currency, in times of currency redundancy, needs strengthening. Upon this subject it is difficult as yet to pass a safe judgment because times have been so abnormal since the system went into operation.

There is no question but that the federal reserve system has added greatly to the elasticity of both our deposit currency and our bank-note currency.

CHAPTER VIII

DOMESTIC AND FOREIGN EXCHANGE UNDER THE FEDERAL RESERVE SYSTEM

We may now pass to the consideration of how the federal reserve system is meeting the difficulties of the old banking régime as regards domestic and foreign exchange. Domestic exchange will be considered first.

Domestic Exchange

Under the old régime the collection and clearing of out-of-town checks for country banks was handled largely by the banks in reserve and central reserve cities, which were the depositories of the legal reserves of the country banks. The service of collecting these out-of-town checks was rendered to the country bank as a partial compensation for the use of its reserve deposits at a low rate of interest, and as a lure to secure other business from the country bank, competition having been keen among large banks in money market centers for the accounts of out-of-town banks. When Congress decided, therefore, that the sys-

tem of pyramiding the legal reserves of national banks by permitting them to be deposited to a large extent in other national banks was a bad one and should be done away with, it was naturally forced to provide a machinery to take the place of the reserve and central reserve city correspondent banks for the work of collecting out-of-town checks. If the country bank was no longer to be permitted to count a deposit with its city correspondent as legal reserve money, but was to be compelled to maintain its entire legal reserve on deposit with its federal reserve bank, it would naturally withdraw or at least greatly reduce its deposit balance with its correspondent banks. But under such circumstances who would collect its out-of-town checks and otherwise serve it in connection with out-of-town business? The city bank, no longer holding the country bank's reserve deposits, would no longer be disposed to perform without charge these services for the country bank; and further, having ceased to be the country bank's reserve agent, the city bank would be very likely to compete for some of the country bank's most attractive business. Obviously if the new federal reserve banks were to displace city correspondent banks as the holders of the country banks' deposited reserves, they should also perform for the country banks the

service of collecting or clearing their out-of-town checks.¹ To this end the federal reserve act provides that the federal reserve board "may at its discretion exercise the functions of a clearing house for . . . federal reserve banks, or may designate a federal reserve bank to exercise such functions, and may also require each such bank to exercise the functions of a clearing house for its member banks" (Section 16). The same section of the law also requires federal banks to "receive on deposit at par from member banks or from federal reserve banks checks and drafts drawn upon any of its depositors, and when remitted by a federal reserve bank, checks and drafts drawn by any depositor in any other federal reserve bank or member bank upon funds to the credit of said depositor in said reserve bank or member bank."

Member banks are permitted to make collection and exchange charges on customers sufficient to cover the actual expenses involved in the collection and remittance of funds. The federal re-

¹ Dr. H. Parker Willis, formerly Secretary of the Federal Reserve Board, states concisely the distinction between collecting and clearing checks, as follows: "A check is said to be collected when it is sent home to the bank on which it is drawn, and arrangement is made to remit the proceeds; it is said to be cleared when the bank receiving it offsets it against checks in favor of the institution by which it is to be paid, and then collects or remits only the balance, if any." *The Federal Reserve*, page 223.

serve board is authorized to fix collection charges for items handled through federal reserve banks.

The problem of establishing a satisfactory clearing and collection system was looked upon as perhaps the most difficult and complicated one confronting the federal reserve authorities in the early days of the new system. At first the federal reserve authorities moved slowly and allowed the different reserve banks a wide discretion in the matter of arrangements for the clearing and collection of checks. Moreover, in most districts the utilization of the clearing and collection system established by the federal reserve bank was optional with member banks. Some joined the system and many did not. It early became evident that to be really effective a clearing and collection system needed to be approximately uniform in its workings throughout the country and to embrace the largest possible number of banks; a system in which a moderate number of banks utilized the federal-reserve clearing and collection system and a large number handled their checks in the old way was unsatisfactory. It meant a wasteful duplication of machinery analogous to that which exists when a city has two separate telephone services. After nearly two years of experimentation, therefore, the federal reserve board promulgated a clearing and col-

lection system, which was put into operation July 5, 1916, in all federal reserve districts—a system whose privileges under certain limitations were extended by an amendatory act of June 21, 1917, to qualifying banks which are not regular members of the federal reserve system.

Present Clearing and Collection System

Briefly summarized, the main features of the new plan, as revised to date (November 1, 1918) are as follows:²

Each federal reserve bank exercises the functions of a clearing house in its district for member banks and for qualified non-member banks, known as "clearing member banks." From such banks in its district the federal reserve bank will receive at par "checks drawn on all member and clearing member banks and on all other non-member banks, which agree to remit at par through the federal reserve bank of their district." Clearing and collection services for member and clearing member banks and for other federal reserve banks are also rendered by each federal reserve bank in the case of checks received from outside the district, which are drawn upon

² The Federal Reserve Board's revised regulations concerning the clearing and collection of checks constitute "Regulation J, Series of 1917," and are published in the Federal Reserve Bulletin of July 1, 1917, pages 546-550.

member and clearing member banks of its district and upon all other non-member banks of its district, whose checks can be collected at par by the federal reserve bank. These two provisions make the field of the par clearing and collection system coextensive with the United States and provide a machinery for the handling of checks received from practically all important points without the district as well as from within the district. All banks belonging to the clearing system are required to pay without deduction checks drawn upon themselves, when presented at their own counters. On January 15, 1920, there belonged to the federal reserve clearing system 9,089 member banks and 16,986 clearing member banks,³ together representing over seven eighths of the incorporated banks of the country in number, exclusive of mutual savings banks, but representing almost all the commercial banking power of the country, since the commercial banks remaining outside the system are for the most part small ones. At that time the federal reserve clearing system was handling about 1,328,000 checks daily (exclusive of those forwarded to federal reserve banks, and their branches, representing approximately \$567,000,000), or a sum equal to about two-fifths of the total clearings of all the clearing houses of the country.

³ Federal Reserve Bulletin, February, 1920, page 194.

The old evil previously described (pages 21-22) of carrying the "float" as a part of a bank's legal reserve is eliminated by a provision to the effect that, although checks received by the federal reserve bank will be immediately credited (subject to final payment) to the bank sending them, the proceeds thereof "will not be counted as part of the minimum reserve, nor become available to meet checks drawn until actually collected." If the bank sending in checks is not to be permitted to draw against the credit which they create until they have been collected, obviously the checks should not be charged by the federal reserve bank against the reserve account of the bank upon which they are drawn until sufficient time has elapsed "for the checks to have reached the member bank and for returns in due course to have reached the federal reserve banks."⁴ This is the rule now in force.

If a bank's deposit at the federal reserve bank is insufficient to cover its legal reserve requirement and in addition to meet an adverse balance, which arises against it out of clearing operations, it is authorized to ship currency or specie from its own vaults at the expense of its federal reserve bank in order to cover the deficiency. In case of

⁴ See Third Annual Report of Federal Reserve Board, 1916, pages 9-12.

a deficient balance at the federal reserve bank, the member bank, of course, also has the privilege of making good the deficiency by rediscounting eligible paper or by discounting with the federal reserve bank its own fifteen day notes secured by eligible collateral.

In handling items for member and clearing member banks, a federal reserve bank acts as agent only.

Under the federal reserve clearing and collection system checks are sent to federal reserve banks and to member and clearing member banks by the most direct routes, and the number of par collection points in the United States is made almost equal to the number of places of any considerable size where commercial banks are located. The result is that the new system is rapidly doing away with the old evil of routing checks.

The cost of collecting and clearing checks for member and clearing member banks is borne by the federal reserve banks. For some time service charges of so much per item were imposed. But these charges, so far as they relate to cash items, were discontinued by an order of the federal reserve board effective June 15, 1918.⁵

The new system does not deny to member

⁵ See Federal Reserve Bulletin, May 1, 1918, pages 371-372.

banks and clearing member banks the right to make a charge against other banks (aside from federal reserve banks) and against their own customers for the collection of out-of-town checks and drafts received over their counters. It does require, however, that these charges shall be reasonable, the reasonableness to be determined by the federal reserve board, and that in no event shall the charge exceed one-tenth of one per cent.

Banks which formerly charged their customers excessive rates for collection are accordingly being forced by competition or by the board's regulations to reduce their charges, while an increasing number of banks appear to be giving up all collection charges on demand items. They may, as a compensation, require customers to carry larger balances, or they may find the expense a productive one as an item of advertising.

Recently the collection service has been extended to items other than checks such as promissory notes, trade bills, time drafts, coupons, acceptances and the like, an obvious need if the federal reserve banks are to serve member banks as adequate substitutes for the member banks' former reserve agents. Such items, when payable at places where the federal reserve banks have satisfactory arrangements for collecting checks

through banks, are collected by federal reserve banks for member banks without any charge other than any exchange charge that may be made by the collecting bank. Upon items returned unpaid, however, there is imposed an additional charge of 15 cents, with the object of preventing the clogging of the federal reserve collection system with dunning drafts.

The Gold Settlement Fund

One serious difficulty of the old collection system, as we have seen (pages 22-23), was the need of numerous and expensive shipments of currency back and forth over the country as the seasonal stresses in the trade demands for currency shifted from one section to another. The new system absolutely eliminates the necessity of a large proportion of these currency shipments and both reduces the expense of those shipments which do take place and lightens its burden by distributing it.

The mechanism by which the necessity of a large proportion of these currency shipments is avoided is that of the Gold Settlement Fund, and the separate but similar Federal Reserve Agents' Fund. The gold settlement fund, although planned in its essentials early in 1914, was not established until June, 1915. The order of the

federal reserve board establishing this fund⁶ requires each federal reserve bank to forward to the treasury or the nearest sub-treasury of the United States for credit to the account of the gold settlement fund \$1,000,000 in gold or gold certificates, and in addition an amount at least equal to its indebtedness due to all federal reserve banks. These sums are made payable to the order of the federal reserve board. Each federal reserve bank is required to maintain a balance in the fund of not less than \$1,000,000. As a matter of fact all the banks carry balances very many times as large as this minimum. Credit on the books of the gold settlement fund is counted as a part of a federal reserve bank's legal reserve. The settlement of balances between federal reserve banks is effected daily through the instrumentality of telegrams sent to the federal reserve board, by transfers of debits and credits on the books of the gold settlement fund.

A separate fund similarly constituted is the Federal Reserve Agents' Fund. Federal reserve agents, it will be recalled, have large funds in their custody, representing gold pledged with them as security for federal reserve notes.

Through the machinery of the gold settlement fund and the federal reserve agents' fund, trans-

⁶ Regulation L. Series of 1913.

fers may be made among all the federal reserve banks, between any federal reserve bank and any federal reserve agent, and between any federal reserve bank or any federal reserve agent and the treasury or any sub-treasury of the United States.

By means of the gold settlement fund, and of the other transfer facilities of the federal reserve banks, these banks are now enabled to make telegraphic transfers of funds to any part of the United States for their members without any charge whatever. They have also been able to inaugurate a system of federal reserve exchange drafts, according to which a member bank may draw special drafts on its federal reserve bank for amounts not exceeding \$5,000, which are receivable for immediate availability at any other federal reserve bank.

The gold settlement fund system of transfers has almost eliminated the necessity of shipping money (other than federal reserve notes) between federal reserve banks. On September 12, 1919, that fund amounted in round numbers to \$538 millions, while the federal reserve agents' fund amounted to \$854 millions, making a total of \$1,392 millions. The combined clearings and transfers for these funds sometimes amount to over a billion dollars in a week. These opera-

tions involve very small changes in the ownership of gold in the funds, sometimes less than 2 per cent of their amount.

The federal reserve clearing and collection system is therefore providing a means of eliminating the evils of the old system. Excessive collection charges are rapidly becoming things of the past. Banks are enabled to dispense with the necessity of tying up large sums in scattered deposits with correspondent banks at low rates of interest for the purpose of securing for themselves adequate facilities for the collection of checks. These deposits can now be brought home and the funds loaned out at much better interest rates. The routing of checks is being eliminated and the "float" is being greatly reduced, all of which are important gains to the public. Heavy currency shipments are avoided, and the expenses of a large part of the currency shipments that do take place are assumed by the federal reserve banks for the member banks. These economies that are being realized by the new system are an important factor in the forces that have made possible the recent great reduction in the reserve requirements of American banks, a reduction which involves a saving of many millions of dollars annually.

Foreign Exchange

The federal reserve law has brought about important reforms in the matter of financing our foreign trade. The rediscount machinery created by our twelve federal reserve banks is doing much toward developing an American discount market. This development is being expedited by the heavy demands for American funds on the part of foreign nations, caused by the war and by the disruption of foreign money markets. Much of our foreign trade that was formerly financed through letters of credit, under which bills expressed in sterling were drawn, is now being financed directly by means of dollar exchange, namely, bills drawn on banks and business houses in the United States and payable in dollars. Banks are willing to buy such paper drawn in connection with our import and export trade, because there is now a ready market for its sale and rediscount—a market created largely by the federal reserve system. Furthermore, bank acceptances in connection with foreign trade are now legalized in the United States, under certain restrictions, and importers may now arrange with American banks to have their foreign exporters draw bills in dollars directly on the importer's bank on the United States; while foreign importers may open credits in

American banks upon which American exporters may draw, the bills being accepted by the American bank and sold in the American discount market.

Federal reserve banks have established agencies abroad, in England with the Bank of England; in France with the Bank of France; in the Philippines, with the National Bank of the Philippines; in Italy with the Bank of Italy; in Japan with the Bank of Japan; in Sweden with the National Bank of Sweden; and in Norway with the Bank of Norway. The foreign exchange division created by the federal reserve board in December, 1917, rendered valuable service during the war in stabilizing exchange both with our allies and with neutrals.

Under the provisions of the federal reserve act, national banks with a capital and surplus of a million dollars or over may be authorized under certain restrictions to establish branches abroad; and many such branches have already been established. National banks may furthermore invest to an amount not exceeding 10 per cent of their capital and surplus in the stock of banks chartered in the United States and principally engaged in international or foreign banking or banking in American dependencies, or engaged in such phases of international or foreign finan-

cial operations as may be necessary to facilitate our foreign export trade. In this way a number of banks have been established which are owned either wholly or in part by groups of national banks.

In order to encourage American trade and the investment of American capital in foreign enterprises, there was added to the Federal Reserve Act on December 24, 1919, an important amendment popularly known as "the Edge Amendment."¹ This amendment authorizes the organization of corporations "for the purpose of engaging in international or foreign banking or other international or foreign financial operations." The field of operation extends to insular possessions of the United States. Corporations organized under this amendment may conduct their business either directly or through the agency, ownership, or control of local institutions abroad. They may not carry on any part of their business in the United States except such as, in the judgment of the Federal Reserve Board, shall be incidental to their international or foreign business. The minimum capital of these corporations is \$2,000,000. In addition to the right of receiving deposits outside of the

¹ The amendment is given in full as Sec. 25 (a) of the Federal Reserve Act. Appendix, p. 161.

United States, they are specifically granted the right "to issue debentures, bonds, and promissory notes," but in no event may a corporation have liabilities outstanding in the form of such obligations exceeding ten times its capital stock and surplus.

There are two important respects in which corporations organized under this Edge Amendment will be affiliated with the Federal Reserve system, although these corporations cannot become regular member banks. In the first place, they operate under the supervision of the Federal Reserve Board which is given by the law large powers of examination and control. In the second place, any national bank may invest in the stock of these corporations, subject to the restriction that its total investment in the stock of these corporations and of other banks incorporated in the United States for foreign business shall not exceed ten per cent of the subscribing bank's capital and surplus.

This Edge Amendment has been on the statute books only a few months, and it is therefore too early to say anything definite as to how it will work. There is a widespread interest in the subject and the prospects appear to be good for a substantial development during the year 1920.

As a result of the war and of recent changes

in our banking system, we are now financing directly a large proportion of our foreign trade, and while this proportion may decline in the future, it will probably never go back to the old pre-war figures. As regards the financing at home of our foreign trade, the federal reserve system was established at the opportune time. It is proving to be a great influence in the internationalizing of American trade and American finance.

CHAPTER IX

THE FEDERAL RESERVE SYSTEM AND THE FEDERAL TREASURY

The fourth and last of the general defects of the old banking system, which were discussed in the early part of this book, was the defective organization of the old system from the standpoint of the federal treasury. How is the federal reserve system remedying this defect?

The provisions of the federal reserve act concerning the deposit of government funds are in section 15. They are: "The moneys held in the general fund of the treasury, except the five per centum fund for the redemption of outstanding national-bank notes, and the funds provided in this act for the redemption of federal reserve notes may, upon the direction of the Secretary of the Treasury, be deposited in federal reserve banks, which banks, when required by the Secretary of the Treasury, shall act as fiscal agents of the United States; and the revenues of the Government or any part thereof may be deposited in

such banks, and the disbursements may be made by checks drawn against such deposits.

“No public funds of the Philippine Islands, or of the postal savings,¹ or any government funds, shall be deposited in the continental United States in any bank not belonging to the system established by this act;² provided, however, that nothing in this act shall be construed to deny the right of the Secretary of the Treasury to use member banks as depositories.”

Many of the advocates of the federal reserve system believed that this section did not go far enough. They believed that the practice of depositing government funds in thousands of banks scattered over the country was a vicious and expensive one, and wished the new law to make the federal reserve banks the depositories of practically all general funds, dispensing with the use of individual banks as depositories and ultimately with the independent treasury system. It was felt by many, however, that the immediate adoption of such a plan would be moving too rapidly and that it was undesirable to limit so narrowly the Secretary of the Treasury, who is

¹ The law was later amended so as to authorize, under certain conditions, the deposit of postal savings funds in banks not members of the federal reserve system. See E. W. Kemmerer, *Postal Savings*, pages 112-116.

² But see pages 86-87.

responsible for the safety of government funds. The extent to which the Secretary of the Treasury should keep general funds in the federal reserve banks, in member banks, and in the sub-treasuries was, therefore, left to his discretion. There appears, however, to have been a widespread belief that the federal reserve banks would become to an increasing extent the depositories of federal funds, and that national banks and the sub-treasuries would, as time went on, receive an ever declining proportion of these funds. The Secretary of the Treasury is a member of the federal reserve board, and there is much to be said in favor of the proposition that banks desiring government funds should present their claims for advances to their federal reserve bank, and should receive such funds only by the ordinary method of rediscount. This would simplify the problem, remove from the Secretary of the Treasury the onerous task of apportioning funds among thousands of individual banks, and discourage the banks from depending upon the Secretary of the Treasury as a sort of grandfather for aid in time of need. The federal reserve bank, which is having continual dealings with all its member banks, would presumably be in a better position to judge the comparative needs of different banks than would the Secretary of the

Treasury. Moreover, how could a federal reserve bank place adequate pressure on member banks to conserve their strength in time of need, to advance discount rates, to contract loans, etc., if the member banks could "go around" the federal reserve bank and the federal reserve board and get funds directly from the Secretary of the Treasury?

For these and other reasons it was expected that the Secretary of the Treasury, in the exercise of the discretion granted him by the law, would deposit his funds in a large and increasing degree in federal reserve banks. Events pointed clearly in this direction prior to our entrance into the war. Governor Strong of the New York Federal Reserve Bank writes me: "The first deposit of government funds made by the treasury with the federal reserve banks was on September 4, 1915, when certain special deposits were made in a number of banks. Later, arrangements were made to have the collectors of customs and collectors of internal revenues in the twelve federal reserve bank cities deposit all of their funds in the federal reserve banks and as a matter of fact, for a long period prior to the passage of the bond act of April 24, 1917, which altered the status of public deposits, the federal reserve banks had been receiving the principal

revenues of the Government outside of postal funds and had been paying a very large proportion of government checks and warrants. The limitation of this fiscal agency service in the collection of revenues and payment of checks to the twelve federal reserve bank cities was, of course, due to the inconvenience of extending these operations to places where federal reserve banks had not yet established branches. The plan therefore of actively employing the federal reserve banks as fiscal agents had been put into operation some time before the first bond bill was passed and was an important and very active part of the work of the reserve banks almost immediately after the arrangement was established."

The abnormal conditions, ~~however~~, created by the European War set up obstacles in the way of the Government's discontinuing the use of individual banks as depositaries of government funds. During the early days of the war the heavy demands for funds in America to meet obligations due abroad and the frenzied condition of the money markets throughout the world naturally prevented the inauguration of a policy of withdrawing government funds from individual banks and depositing them in the federal reserve banks. Later the heavy buying in this country by European belligerents discouraged such a

policy. Such was not a time for withdrawing large sums from individual banks. Finally our own entrance into the war and the floating of our huge Liberty loans rendered a transfer of this kind out of the question. In the interest of causing a minimum of disturbance to the money market in the floating of these loans, the Government wisely adopted the policy of keeping the funds widely scattered and to as large an extent as practicable in the banks of the communities where they were received. The result is that in recent times there have been more government funds in individual banks than at any previous period in our history. The deposit of government funds, moreover, is no longer limited to banks that are members of the federal reserve system, since the law under which all government bonds and certificates of indebtedness have been issued since we entered the war provides for the deposit of their proceeds in qualified national banks and state banks and trust companies against certain approved collateral. Numerous nonmember banks therefore have qualified as depositories in connection with our Liberty loans.

What will be the Government's policy in this matter after the abnormal conditions resulting from the war have passed, of course, it is impossible to say at this time.

As fiscal agents of the Government, the federal reserve banks rendered the nation services of incalculable value after our entrance into the war, services in connection with the issuance of our large Liberty loans and our ad-interim treasury notes, with a minimum disturbance to our money markets. They aided greatly in the conservation of our gold resources, in the regulation of our foreign exchanges, and in general in the centralization and efficient utilization of our financial energies. In this time of great emergency the federal reserve system was a bulwark to our national finance. One shudders when he thinks what might have happened if the war had found us with our former decentralized and antiquated banking system. Think of pouring the crisis of 1914-1918 into bottles that broke with the crisis of 1907!

The post-war situation demands in financial matters the maximum of efficiency. If we are to do our part in solving the tremendous financial problems of world reconstruction, we must make every dollar count to the utmost. This means the coordination of all parts of our banking system. It means integration under a responsible central control, and it means administration with sole regard to national welfare. Upon this subject we may conclude this book with the

words of President Wilson, made public October 13, 1917. They apply to the period of reconstruction as truly as they did to the period of the war:

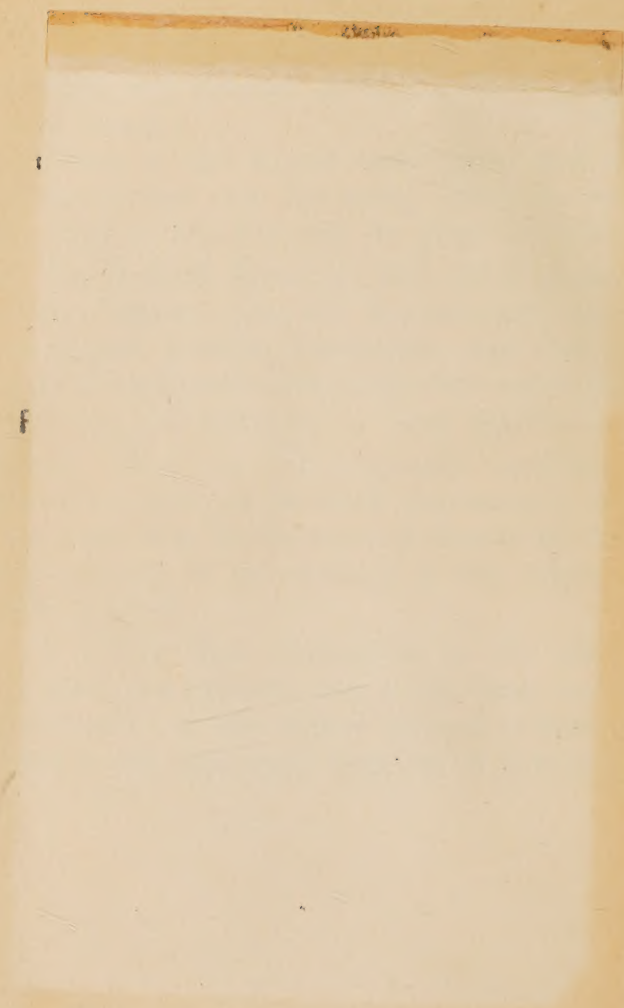
"It is manifestly imperative that there should be a complete mobilization of the banking reserves of the United States. All who are familiar with financial operations must appreciate the importance of developing to the maximum our banking power and of providing financial machinery adequate for meeting the very great financial requirements imposed upon our country by reason of the war. A vigorous prosecution and satisfactory termination of the war will depend in no small degree upon the ability of the Government not only to finance itself, but also to aid the governments associated with it in the war, which must be kept supplied with munitions, fuel, food, and supplies of all kinds. The banking problem involved is one which concerns all banks alike. Its solution does not depend upon the national banks alone, nor upon the state banks. The burden and the privilege must be shared by every banking institution in the country. . . .

"The extent to which our country can withstand the financial strains for which we must be prepared will depend very largely upon the

strength and staying power of the federal reserve banks. . . .

“Many of the largest state banks and trust companies are now becoming members, realizing that to win the war we must conserve all of the physical, financial, and moral resources of our country—that our finances must rest on the firmest possible foundation, and that they must be adequately and completely conserved so as to respond instantly to every legitimate demand. How can this necessary condition be brought about and be made permanently effective better than by the concentration of the banking strength of our country in the federal reserve system? . . .

“I believe that cooperation on the part of the banks is a patriotic duty at this time, and that membership in the federal reserve system is a distinct and significant evidence of patriotism.”



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